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AUTHOR Harste, Jerome C.
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ABSTRACT

Children's early writing is analyzed in this paper according to different perspectives such as function, grapho-phonemics, syntax, and semantics. Emphasis is given to the semantic perspective of decoding the text and to the study of coherence in text as it is viewed by the reader. Proposition analysis is used to map the coherence of samples of writing, using a modified system developed by W. Kintch and T. A. van Dijk. Mapping is cited as important from a writer's perspective to assure that a reader will be able to follow or semantically track one's writing and from a learning perspective to see how the units of meaning are organized and how they relate to each other. (MKM)

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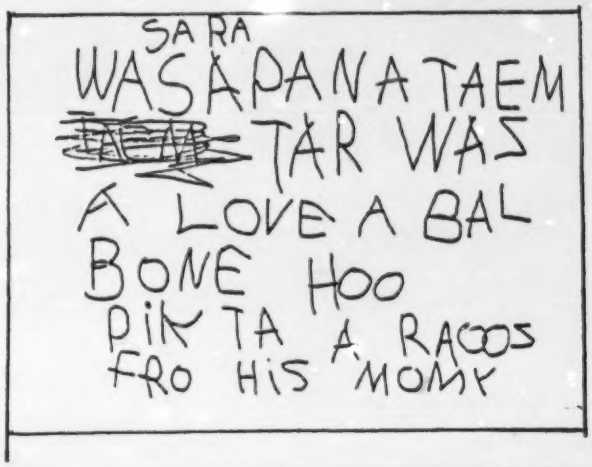
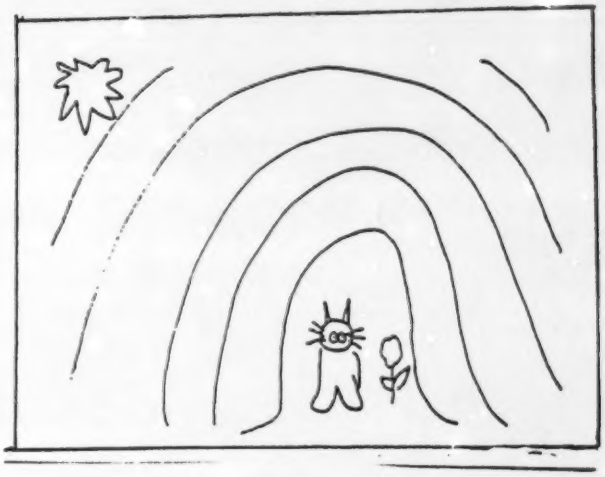
SEMANTIC MAPPING: A TEXT PERSPECTIVE

by
Jerome C. Harste
Indiana University

*Speech given at the Annual Meeting of the Mid-Western Educational Research Association, Toledo, October 16, 1980.

TEXT	SUPPORT
I'm going to start off today with a little activity.	
Can you read this?	
It might help to see the picture which Sara made to go with her text.	
Sure! Once upon a time there was a lovable bunny who picked a rose for his mommy.	
A neat text!! Produced by a 5-year old, no less!	
* * *	
I wanted to start here, with an actual text, to give a perspective to what my colleagues and I will be talking about today.[16]	
* * *	





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TEXT	SUPPORT MATERIALS
It is important to understand that any text allows us to take a multitude of perspectives.[1] * * * We can take a pragmatic perspective by asking ourselves what function this text was designed to serve. Knowing that it is a Mother's Day Card, we have to say that the text serves the expression of love, thoughtfulness, appreciation; in short, "Mother's-Day-Ness," quite well.[2] * * * We might look at it with <u>grapho-phonemic</u> eyes, noting the regularity of the child's rules relative to letter-sound relationships (Read, 1971). We might, still with a grapho-phonemic perspective, look at it from the vantage point of reading. At this level, the question we would ask is,	<u>TEXT PERSPECTIVES</u> • PRAGMATIC function • GRAPHOPHONEMIC spelling the way it sounds spelling the way it looks spelling the way it means • SYNTACTIC flow structure • SEMANTICS semantic field semantics of syntax (transitivity) syntax of semantics (i.e., case grammar) ↓

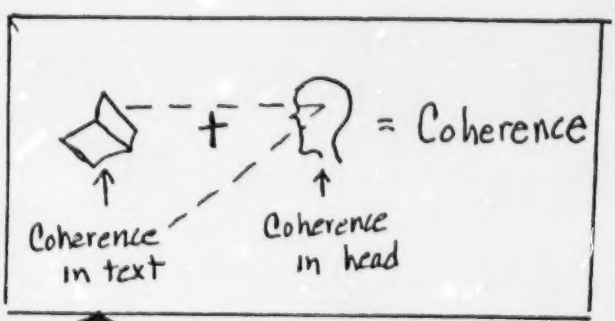
TEXT	SUPPORT MATERIALS
"What evidence exists that past encounters with print have influenced the child's spellings?"	
We would then be looking for spellings which could not totally be explained phonetically, but which instead involve visual memory.	
The FRO for FOR is an example in this text.	
* * *	
I'm also thinking of such instances as where one preschooler was spelling MILK orally and in so doing joined the L and K in her writing. She then paused and said "That doesn't look long enough" and added an E (Y. Goodman, 1979).	
Or the child who spelled flying as <u>fliying</u> (Y. Goodman, 1980). We ask why the Y - clearly the i phonetically captures the sound - and we have to conclude the Y	

TEXT	SUPPORT MATERIALS
is there because this written language user had seen the word written - that he is spelling the way he is because he previously was a reader.	
In addition to looking at spelling the way it sounds, and spelling the way it looks, we might even look at it a third way; namely, spelling the way it means.	
In this instance then we would have to look for spellings which have a morphemic explanation.	
LOVE A BAL might be an example in this text.	
I recall one language user (Mike, grade 4) who made repeated attempts at spelling "Finally". He tried "finale", finalely", and finally settled for "finely" (F-I-N-E). (Harste, Menosky, & Burke, 1980).	

TEXT	SUPPORT MATERIALS
This look might also be fun and even insightful. * * * At another level we could look at the text <u>syntactically</u>. We could ask: "Does it flow?" Is there inflectional agreement within and across sentences?" "Does it sound like oral or written language?" Since no one runs around saying, "Once upon a time there was a lovable bunny who picked a rose for his mommy," except under a special setting such as a story telling, we intuitively know it is written language as opposed to oral language. Oral language is syntactically complex but conceptually not very dense. (Halliday, 1980). Written language is conceptually dense but syntactically elegant.	

TEXT	SUPPORT MATERIALS
(Halliday, 1980).	
* * *	
And that is true.	
If you don't believe it, try coding an oral as opposed to a written retelling sometime.	
* * *	
A syntactic look at text is fun, too, and moderately insightful.	
* * *	
But we can also look at text <u>semantically</u>.	
And if there is one thing we learned in the last ten years it is that semantics isn't a single system.[3]	
There is "semantics" - the field of meaning set up in the text - partly identifiable through the lexical chains which run through the text to establish parameters of meaning within which the rest of the text falls.[4]	

TEXT	SUPPORT MATERIALS
There is the "semantics of syntax" or how meaning is ordered within sentences. Who does what to whom is important. * * * There is the "Syntax of Semantics" or how meaning is ordered in text. Knowing the setting, "Once upon a time, there was a bunny," sets a stage in which we expect an initiating event; the initiating event sets the stage for us to want to hear an attempt: an attempt, a consequence and so on.[5] The "Syntax of Semantics" within some genre of texts are better known than in others, but that it exists and operates there is of little debate.[6] * * * In many ways lots of the hot topics in reading and writing are nothing more than current	

TEXT	SUPPORT MATERIALS
attempts to do just that.	
Meaning is orchestrated through mood, intonation pattern, rheme-theme, cohesion, transitivity relationships, given-new contracts, and more (Halliday & Hasan, 1980; Fries, 1980).	
Cohesive harmony, (Hasan, 1980) propositional analysis, (Kintch & Van dijk, 1978; Fredricksen, 1978) , macrostructure analysis (Van dijk, 1978, 1980). and others are attempts to describe and understand the semantic system of language in use.	
* * *	
A text to be coherent must have unity; that is, the units of meaning in the text must cohere.	
Coherence resides, however, not only in the text, but in the mind of the beholder.	
* * *	
I am reminded of driving in Alabama.	

TEXT	SUPPORT MATERIALS
On Highway 79 from Anniston to Atlanta one approaches a bridge. On one side of the bridge is a sign announcing "Unsafe Bridge" On the other side of the bridge is a sign announcing "Jesus Saves." * * * These texts were not meant to be coherent by the road crew who put the first text up, and the church group who put the second one up. Whatever coherence we see, it lies no in the text, but in our minds.[7] * * * In similar regard it is important to understand that the act of joining the two by saying "The bridge is unsafe <u>and</u> Jesus Saves" does not in itself make this new text coherent. We can theoretically join any 2 idea units with a connective of some sort.[8]	

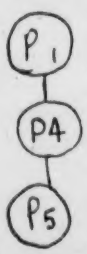
TEXT	SUPPORT MATERIALS
One has to look at the components of meaning across units; not go by a particular linguistic feature.	
Coherence simply defined is a measure of how unified the idea units of a text are.[9]	
Part of coherence is directly expressed in text; the rest lies outside of text.	
The procedure which we will share today is an attempt to map the coherence that is expressed in text at a deep structure semantic level.	
It is assumed that the expression of coherence in text is important.	
From the writer's vantage point the expression of coherence assures him that his reader will be able to follow - or semantically track him.[10]	

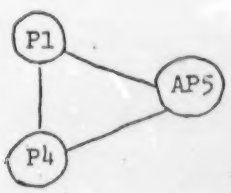
TEXT	SUPPORT MATERIALS
From a learning perspective, the expression of coherence in text assures us that the units of meaning are organized and are not just bits of isolated information.[11]	
If we take the text I introduced at the beginning, the first thing we need to do is identify the units of meaning which reside in the text.	
That is what propositional analysis is about.	
Once we have identified the main line units of meaning we can then look across them in order to see what relationships exist between them.	
For those of you who have not done propositional analysis - it's rather easy, and there are several systems, all of which are about the same.	

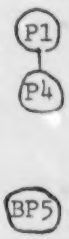
TEXT	SUPPORT MATERIALS
It's not really important which system you use.	
The system I use is a modification of that used by Kintch and Van dijk.[12]	
Using this system you first look at sentences to identify main line units of meaning or what I call facts.	
If we do that we find that the first part of the sentence gives us one basic fact - <u>that there exists a bunny</u>.	
We can write that:	1. (EXIST, BUNNY)
<u>Once upon a time</u> tells us the circumstances of when the bunny existed.	2. (CIRCUM: (1), ONCE UPON A TIME)
This second proposition modifies the first proposition. It's not a new basic fact, but a condition modifying the first basic fact.[13]	

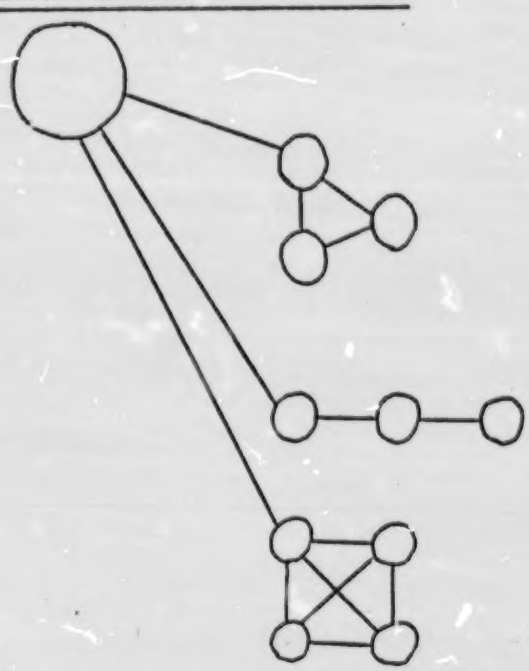
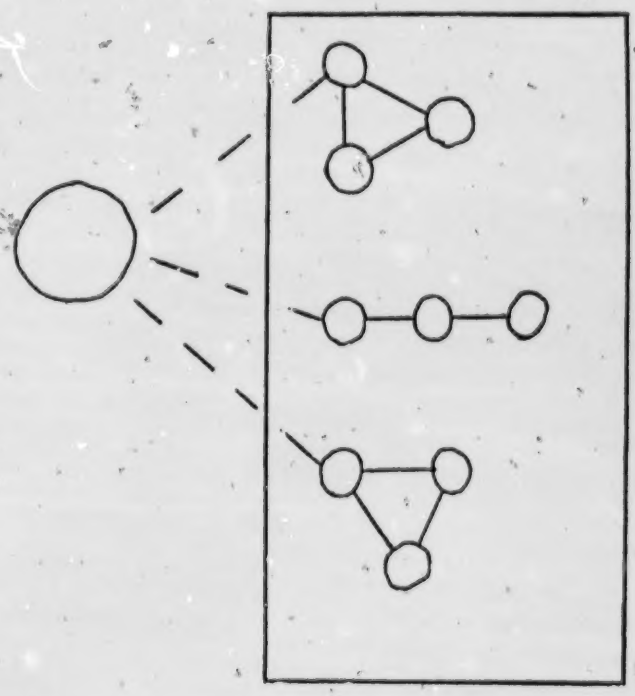
TEXT	SUPPORT MATERIALS
I draw an arrow through the #2 to show this, as all I wish to deal with are basic facts of meaning in the text.	—2→ (CIRCUM: (1), ONCE UPON A TIME)
I do this under the assumption that modifications (propositions which modify) are by definition already coherent.	
The text reads: Once upon a time there was a lovable bunny...	
So far we have everything mapped except 'lovable.'	
Our third proposition, then is:	3. (QUALITY OF, BUNNY, LOVABLE)
This too is a modification of a basic fact and so it too receives an arrow.	—3→(QUALITY OF, BUNNY, LOVABLE)
What all this means, then, is that we are left with just one basic fact from the first portion of this sentence:	1. (EXIST, BUNNY)

* * *

TEXT	SUPPORT MATERIALS
Let's go to the next part of the sentence: "...who pickei a rose for his mommy."	
Here we find another basic fact:	4. (PICK FOR, BUNNY, ROSE, G: MOMMY)
We now have 2 basic facts:	1. (EXIST, BUNNY) 4. (PICK FOR, BUNNY, ROSE, G: MOMMY)
Since Proposition 1 (P1) and Proposition 4 (P4) share a common case; namely BUNNY, we map them as tied. To show this, we draw a line connecting them.[14]	
* * *	
Our text ends here, but let's assume it went on. Before I end this discussion, we will assume three different endings.	
* * *	
Let's assume the next line of text was She was happy.	
We would propositionalize this:	5. (HAPPY, E: MOMMY) where E = Experiencer
Because the case, MOMMY, appears in P4 and P5 we tie these two when we map them.	
* * *	

TEXT	SUPPORT MATERIALS
Now, for purposes of further illustration, let's assume the text didn't read, "She was happy," but rather, "Bunny and Mommy were happy."	
We would propositionalize this:[15]	A5. (HAPPY, E: MOMMY, BUNNY) ~~A6.~~ (CONJ: AND, MOMMY, BUNNY)
Because P4 and the new alternative AP5 share the case MOMMY, and because P1 and the new alternative AP5 share the case BUNNY, we would have to draw our map such that both elements of coherence could be shown.	
* * *	
As you can see the map chages shape as the coherence changes, giving one an additional benefit in that the text structure can be identified.[7]	
* * *	
But to carry this even further and for purposes of contrast, let's assume that the child wrote, instead: "Father threw up."	

TEXT	SUPPORT MATERIALS
A propositional analysis of this sentence would be:	BP5. (THROW UP, FATHER)
Since THROW UP, FATHER, shares no cases with PICK FOR, BUNNY, ROSE, G: MOMMY or EXIST, BUNNY, we would have to map it showing no tie.	
This does not mean we could not make it coherent or tied to the other text portion, but it does mean we - the reader - must do it; that whatever coherence there may be, it's not expressed in the text base.	
A coherent text need not be one that has all of its main line propositions tied to each other, but Margaret Atwell (1980) has found that texts which judges perceive as well-written have a higher degree of local coherence (.90+ or -) than do texts which judges perceive as less well written (.76 + or -)	

TEXT	SUPPORT MATERIALS
* * * Mapping texts in this fashion, then, gives one a measure of the <u>local coherence</u> expressed in a text. By taking the number of ties over the number of main line propositions, a ratio can be obtained which expresses the degree of local coherence in a text in mathematical terms. * * * One can tell by looking at the maps produced whether global coherence is expressed in the text base or whether it must be inferred. Expressed global coherence means that there is a proposition in the text to which all others relate. Inferred global coherence means that there is no single proposition which is expressed to which all others tie, but that one can easily think of one which if expressed, would serve this function. * * *	 GLOBAL COHERENCE EXPRESSED  GLOBAL COHERENCE INFERRED

TEXT	SUPPORT MATERIALS
Drs. Carolyn Burke, Virginia Woodward and myself (in progress) have found it useful for mapping written language growth and development among the texts produced by 3, 4, 5, and 6-year olds.	
* * *	
What we find is that coherence is not a monolithic skill.	
Language users don't either have it or not have it.	
* * *	
Under certain conditions children's stories express more or less coherence.	
* * *	
In part, coherence expressed in text is a function of the conditions under which the text is produced.	
Certain settings not only allow but encourage children to test other language hypothese.	

TEXT	SUPPORT MATERIALS
These hypothese range from pragmatics to graphophonemics to syntax, to other dimensions of semantics. * * * In its specific detail the amount of coherence expressed in a text is a function of the setting in which the writing takes place, and the intentions of the writer. * * * Written language use is a complex social event. (Harste, 1980) * * * The expression of coherence in text is just one of a number of elements which must be orchestrated in written language use and learning. * * * But this dimension is important, and as of now the procedure I have introduced seems sensitive enough to distinguish some key aspects of semantics in texts. We have in short found it useful.	

ASIDES

[1]I could and probably should add to this statement, "just as any setting which affords the language user the opportunity to produce text allows testing of a variety of hypotheses which relate to and across these perspectives."

[2]While this is true, it does not really resolve the pragmatic issues surrounding this text. Halliday (1980) argues that context is expressed in text. That is, by examining text one can tell whether it is oral or written language (mode), where one would be likely to find it (field), and for and by whom it was expressed (tenor). While this text is clearly written language, the field suggested is a fairy tale, not a Mother's Day card, and the tenor is child to mother, not adult writer to child as one would expect if one examined this text in the abstract. The child here has been extremely clever and this no doubt adds to the intrique of the piece. But enough said. The issue is raised, not resolved. To go further into it would only pull us away from the topic at hand.

[3]The classificational scheme I introduce here to descibe the semantic systems in language is that of DeBeaugrande (1980); Halliday (1980) says there are 7 systems which carry semantic information, of which his book on cohesion (1975) is but one.

[4]Mary Pratt (1976) refers to this as "semantic field;" but see also "Cohesive Harmony" by Hasan (1980) whose procedure I find hopeful for getting a handle on semantic field; Peter Fries (1979) has also successfully addressed this issue by studying paradigmatic and syntagmatic relationships in text.

[5]See Stein and Glen (1978) for one such story grammar scheme.

[6]See Anderson (1978) and Meyers (1977) for attempts at mapping informational grammars.

[7]Most story grammar systems, whether they be for narrative or expository texts, assume a finite set of conventional adult story grammar forms exist and can be applied to the analysis fo a given reader or writer-generated text as a template. This, however, ignores the generativeness of language use. The mapping procedure to be discussed here allows one to study text structure without imposing a single or or finite set of addult story grammar forms. It, in short, helps us stop confusing convention of language (Harste, 1980).

[8]This is particularly true with texts produced by young children. "And" often serves a pragmatic - holding the floor - function, rather than a semantic function as we currently think about it.

[9]Cohesion, in contrast, is that portion of coherence expressed in the surface structure of text by various linguistic devices (see Halliday/ 1975).

[10]For this reason, Margaret Atwell (1980) has applied this technique in an effort to describe the written texts produced by good and poor writers. She, by the way, found it useful where cohesion showed no difference.

[11]David Caverly (1980) has applied this technique in an effort to describe the retellings produced under various reading instructional procedures. He, by the way, also found it useful, when a content analysis showed that the sheer number of bits of information recalled did not differ.

[12]Turner and Greene (1977) have written a technical manual for Kintch and Van dijk's system. Some of the modifications which we felt necessary because we applied it to a whole text are described in a monograph by Harste and Feathers (1979). Other sources which describe propositional analysis even further are Miller and Kintch (1980) and Van dijk (1980).

[13]While there are several ways to propositionalize Once upon a time, this does not alter the fact that Once upon a time modifies the basic fact being expressed; namely, that there exists a bunny. I have found keeping Once upon a time as a whole unit of meaning is helpful for purposes of studying other features of the semantic system; namely how super-structure or genre is accessed.

[14]Some persons, including Kintch and Van dijk as explained by Turner and Greene (1977), might like to proposition this portion of text as:

4A. (PICK, BUNNY, ROSE)
5A. (GIVE, BUNNY, ROSE, G: MOMMY)
6A. (PURPOSE OF: (4A), (5A))

The procedure, however, generates 2 basic facts when only 1 is expressed in the text. I prefer to write PICK FOR as the predicate case for this reason.

Which procedure one chooses isn't really important. The important thing is that you be consistent and use one and only one system if you wish to compare texts.

I have found inter-rater reliability to shoot up when this fule is followed closely.

Because we, too, in doing a propositional analysis, are acting as a reader, all propositional analysis gives you is some semantic representation of the transitivity relationships in text, not the "true" text base (which remains in the author's head). This bothers some people. I can live with it as I have found no way out of this dilema, and clearly ignoring semantics because it's hard to handle, as we have done in the past, is no answer. If one accepts propositional analysis on these terms, it can provide useful insights and serve as a good tool. But one should never act as if it's more than it is, and here sometimes lies the problem. It gives you a look at a portion of the semantic structure of a text. It does not map "the semantic base" or "the meaning" of text.

[15]This should really be written (HAPPY E: (A6)) where the Proposition A6 is embedded in Proposition A5. But for present purposes my modification is clearer.

[16]This paper was meant to be an introduction to semantic mapping and precede more complex examples of its use discussed in addresses by Margaret Atwell and David Caverly. Both of these persons are using this procedure as parts of their analysis of texts in their dissertations. Margaret Atwell can be contacted at the Reading Department at Indiana University. David Caverly can be contacted in the Department of Reading at Northwestern University.

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